UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/686,331	10/14/2003	Richard M. Butler	10991268-3	7201

22879 7590 02/27/2006	EXAMINER
HEWLETT PACKARD COMPANY	DO, CHAT C

	ART UNIT	PAPER NUMBER
HEWLETT PACKARD COMPANY P O BOX 272400, 3404 E. HARMONY ROAD INTELLECTUAL PROPERTY ADMINISTRATION FORT COLLINS, CO 80527-2400	2193	

DATE MAILED: 02/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	10/686,331	BUTLER, RICHARD M.
	Examiner	Art Unit	
	Chat C. Do	2193	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>21 November 2005</u>.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-22</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) <u>22</u> is/are allowed.

6)☒ Claim(s) <u>1-21</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

        1.☐ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____.

        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☒ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. *attached herein* .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

1.   This communication is responsive to Appeal brief filed 11/21/2005.

2.   Prosecution on the merits of this application is reopened on claims 1-22 are considered.

3.   Claims 1-22 are pending in this application. Claims 1 and 22 are independent claims.

This Office Action is made non-final.

Claim Rejections - 35 USC § 101

4.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5.   Claims 1-21 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 1-21 recites a method of generating a random number according to a mathematical algorithm. In order for a method claims to be statutory, the claims must include a practical application that produces a useful, concrete, and tangible result. However, the claims merely recite a method of generating a random number based upon an algorithm. As guided, a claim that recites a computer implemented that solely calculates a mathematical formula or a computer medium that solely stores a mathematical formula is not statutory. Therefore, claims 1-21 are directed to non-statutory subject matter.

Claim Rejections - 35 USC § 102

6.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on
sale in this country, more than one year prior to the date of application for patent in the United States.

7.   Claims 1-2, 7-16, 18, and 20-21 are rejected under 35 U.S.C. 102(b) as being anticipated

by Broseghini et al. (U.S. 5,416,783).

Re claim 1, Broseghini et al. discloses in Figures 1-9 a method of generating a

random number (e.g. col. 9 lines 41-44), comprising: retrieving values from a number of

multiple input shift registers (MISRs) (e.g. col. 9 lines 45-54 and col. 13 lines 47-56,

steps 2 and 3) which are coupled to a number of microprocessor buses (e.g. Figure 3 and

col. 2 lines 14-28); and generating a random number which is based on the values

retrieved from the number of MISRs (e.g. col. 10 lines 3-14).

Re claim 2, Broseghini et al. further discloses in Figures 1-9 the number of

MISRs is one (e.g. col. 9 lines 45-54 and col. 13 lines 47-56).

Re claim 7, Broseghini et al. further discloses in Figures 1-9 one of the number of

MISRs is coupled to a bus which runs wholly within an integrated circuit package (e.g.

Figure 3 as CPU integrated circuit).

Re claim 8, Broseghini et al. further discloses in Figures 1-9 retrieving values

from the number of MISRs comprises: loading bits of a value stored in a first of the

number of MISRs, in parallel, into a temporary register (e.g. col. 9 lines 55-63); and

retrieving the value stored in the temporary register (e.g. col. 9 line 64 to col. 10 line 2 for

retrieving to AND with Mask value).

Re claim 9, Broseghini et al. further discloses in Figures 1-9 retrieving values

from the number of MISRs comprises retrieving a value from a first of the number of

MISRs by stepping the first of the number of MISRs to serially shift a plurality of bits out

of the MISR (e.g. col. 9 lines 45-54 and col. 13 lines 47-56).

Re claim 10, Broseghini et al. further discloses in Figures 1-9 generating a

random number comprises hashing together the values retrieved from the number of

MISRs (e.g. col. 10 lines 3-14 by XOR operation).

Re claim 11, Broseghini et al. further discloses in Figures 1-9 generating a

random number comprises XORing the values retrieved from the number of MISRs (e.g.

col. 10 lines 3-14 by XOR operation).

Re claim 12, Broseghini et al. further discloses in Figures 1-9 turning on and

initializing each of the number of MISRs upon boot of a computer in which the MISRs

reside (e.g. inherently).

Re claims 13-14 and 16, values are retrieved from the number of MISRs via an

operating system call wherein the operating system call is of a highest privilege level and

issued in response to an application's request for a random number (e.g. inherently).

Re claim 15, Broseghini et al. further discloses in Figures 1-9 generating a

random number is performed immediately after the number of MISR readings are taken

(e.g. Figure 5 and Figure 9), the method further comprising storing the random number in

a temporary location for subsequent use (e.g. col. 10 lines 29-30).

Re claim 18, Broseghini et al. further discloses in Figures 1-9 generating random number comprises providing the values retrieved from the number of MISRs, as well as historic values retrieved from the number of MISRs, to a pseudo-random number generator (e.g. col. 8 line 50 to col. 9 line 40).

Re claim 20, Broseghini et al. further discloses in Figures 1-9 the random number is an encryption key (e.g. col. 18 lines 48-50).

Re claim 21, Broseghini et al. further discloses in Figures 1-9 the MISRs form part of a microprocessor's built-in self-test hardware (e.g. Figure 3 and col. 6 lines 6-19 with the random generator circuit).

Allowable Subject Matter

8.   Claim 22 is allowed.

Response to Arguments

9.   Applicant's arguments with respect to claims 1-21 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chat C. Do whose telephone number is (571) 272-3721. The examiner can normally be reached on M => F from 7:00 AM to 5:30 PM.
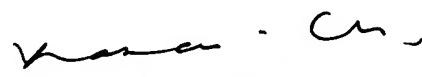
If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Chaki Kakali can be reached on (571) 272-3719. The fax phone number for the

organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Chat C. Do
Examiner
Art Unit 2193

February 17, 2006

KAKALI CHAKI
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TECHNOLOGY CENTER 2100